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The new lectotypification of *Umbilicaria kisovana* (*Umbilicariaceae*, lichenized *Ascomycota*)

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Abstract — The protologue and typification of the name *Gyrophora kisovana* [*Umbilicaria kisovana*, an East Asian lichen-forming fungus] are discussed. The lectotype is designated from the Asahina collection deposited in TNS.

Key words — authorship, Japan, nomenclature, spelling, valid publication

Introduction

Umbilicaria kisovana (*Umbilicariaceae*, lichenized *Ascomycota*) is characterized by small brown brittle thalli lacking rhizinomorphs and thalloconidia, sometimes bearing gyrodisc apothecia containing octosporic asci. The distribution of the species is restricted to East Asia (Japan, Korea, Russian Far East, and China) where it grows on siliceous rocks at elevations between 400 and 2100 m (Satô 1956, Wei & Jiang 1993, Davydov & Zhdanov 2010). Wei & Jiang (1993) lectotypified the species name by an illustration published in its protologue. However, Asahina (1931) cited several syntype specimens in the protologue, and the lectotype should be selected from those specimens. The purpose of this study is to analyze the protologue and to designate the correct lectotype of *U. kisovana* from its syntypes.

Nomenclature

Asahina (1931) published *Gyrophora kisovana* (the basionym of *Umbilicaria kisovana*) with a description in Japanese. Although the protologue lacks a

Latin description, the name was accepted by Asahina and therefore is validly published according to ICN (2012: Art. 36.1(a), 38.1, 39.1).

Because the protologue was in Japanese only, there has been nomenclatural confusion. Satô (1940) provided a Latin description for *Gyrophora kisovana* based on the specimens cited by Asahina (1931) as well as several additional specimens, including a fertile specimen from Korea collected by Satô. In the Japanese summary, Satô (1940) explained the reason for providing a Latin description as, "the detailed description with illustrations of '*G. kisovana* Zahlbr.' was provided by Asahina (1931) but the Latin description has not been published yet. And also, the species was not cited in the Catalogus Lichenum Universalis. Because of such situation this species seems not to be recognized in science. Therefore, I provide the Latin description for the species."

Satô was most likely influenced by the attempts to introduce the mandatory use of Latin in earlier Codes. The Brussels Rules (1912) required Latin beginning from 1908 (Art. 35). However, the Cambridge Rules (1935), which were in effect by 1940 although probably not taken into account by Satô, moved the date to 1935 (Art. 38) – thus legalizing the new plant names in Asahina (1931). Satô (1956: 33) again published a Latin description (as "sp. nov.") citing the same reason used earlier (Satô 1940). When Zahlbruckner (1940) transferred the species into *Umbilicaria*, he cited Asahina (1931) as the source of the basionym, an authorship accepted by Llano (1950) and Wei & Jiang (1993), among others. However, Kurokawa & Nakanishi (1971) regarded Satô (1940) as the valid publication for *Gyrophora kisovana*, and proposed a new combination on that presumed basionym [i.e., *Umbilicaria kisovana* (Zahlbr. ex M. Satô) Kurok.]. Index Fungorum (www.indexfungorum.org) lists the name as *Umbilicaria kisovana* (Zahlbr. ex M. Satô) Zahlbr.

For reference purposes, we provide a translation of the complete Japanese protologue of *Gyrophora kisovana* (Asahina 1931), which may be difficult to access for most of lichenologists, along with some comments:

> «…, however a species which resembled *Heppia guepini* is distributed in Japan. I gave the Japanese common name for the species as "Hime-iwatake" [that means 'small iwatake', i.e., small *Umbilicaria esculenta* (Miyoshi) Minks], which was collected by me in Tamba Province [old district where was located in parts of Kyoto and Hyogo Prefectures, western Japan] at first. And then, this species was also collected in Nezamenotoko, along Kiso River [Nagano Prefecture] and middle slope of Mt. Nishikoma [= Mt. Nishikoma-ga-take, Kisokoma, or Kisokoma-ga-take, in Nagano Prefecture]. Hime-iwatake is slightly larger than *Heppia guepini*, however the thallus of hime-iwatake is also monophyllous and gregarious. Thallus is thin and frangible; upper surface is dark brown, and lower surface is dark blackish brown; and the thallus is attaching to granite rock by the umbilicus on the lower surface. Distinct upper and lower cortex and gonidia layer (*Pleurococcus*) are developed in the thallus. Apothecia are gyrodisc type.

> Asci are clavate, 66 × 18 µm, and 8-spored. Ascospores are ellipsoid, colorless, simple, and 16–23 × 5–7 µm in size. All of my collections were sterile but a specimen collected from Miyajima Island in Hiroshima Prefecture (leg. Atsushi Yamamoto) bear apothecia. I sent a specimen to Dr. Zahlbruckner, and he named it *Gyrophora kisovana* Zahlbr. sp. nov., but it has not yet been published.»

For the lectotype of the name *Gyrophora kisovana,* Wei & Jiang (1993) proposed the photograph of the species habit as well as the drawing of the species habit, ascus and spores that Asahina (1931) published in the protologue. However, since specimens were cited in the protologue, the lectotype must be chosen from this part of the original material (ICN 2012: Art. 9.12, 9.19 + Ex. 13).

The above translation shows that Asahina (1931) cited four collections in the protologue. They were collected from Tamba Province, Nezamenotoko along Kiso River, middle slope of Mt. Nishikoma, and Miyajima Island in Aki Province. The protologue indicates that although the first three collections were sterile, the last (from Miyajima Island) was fertile. TNS houses specimens labeled "Gyrophora kisovana" that were collected in the mentioned localities before the publication of Asahina (1931), but the specimen from Miyajima Island collected by Atsushi Yamamoto could not be found in TNS. Among Asahina's specimens, the specimen collected in Mt. Nishikoma is richly fertile, which is inconsistent with the protologue, although Dr. Asahina labeled it as "Typus" for *Gyrophora kisovana*. One of the remaining gatherings was collected at "Oninokakehashi" located in Tamba. Other specimens, separated into three packets, were collected along Kiso River in Agematsu-machi, Kiso-gun, Nagano Prefecture where "Nezamenotoko" is situated but it was not mentioned on the original label. They are morphologically consistent with the protologue and possible candidates for the lectotype. We could not find the sterile specimen on a rock, which appeared in the figure of the protologue. Among the available original material, we designate one of the specimens (TNS-L-27375) collected along Kiso River as the lectotype of *Gyrophora kisovana* (Fig. 1).

The nomenclature of the species should be treated as follows.

Umbilicaria kisovana (Zahlbr. ex Asahina) Zahlbr., Cat. Lich. Univ. 10: 405. 1940.
≡ *Gyrophora kisovana* Zahlbr. ex Asahina, J. Jap. Bot. 7: 327. 1931.

Type: Japan. Honshu. Prov. Shinano (Pref. Nagano): along Kiso River, Nezamenotoko, Agematsu-machi, Kiso-gun, on granite rocks, elevation about 700 m, 17 October 1927, Y. Asahina s.n. (**Lectotype designated here**, TNS-L-27375; **isolectotypes**, TNS-L-27389, TNS-L-27390).

Other syntype traced: Japan. Honshu. Prov. Tamba (Pref. Hyogo): Oninokakehashi, Hikami-gun, 14 July 1927, Y. Asahina s.n. (TNS-L-27393).

Asahina did not directly explain the etymology of *Gyrophora kisovana* in the protologue, but the epithet was apparently derived from the locality, Kiso. However, some of the original labels signed by Asahina read "*Gyrophora*

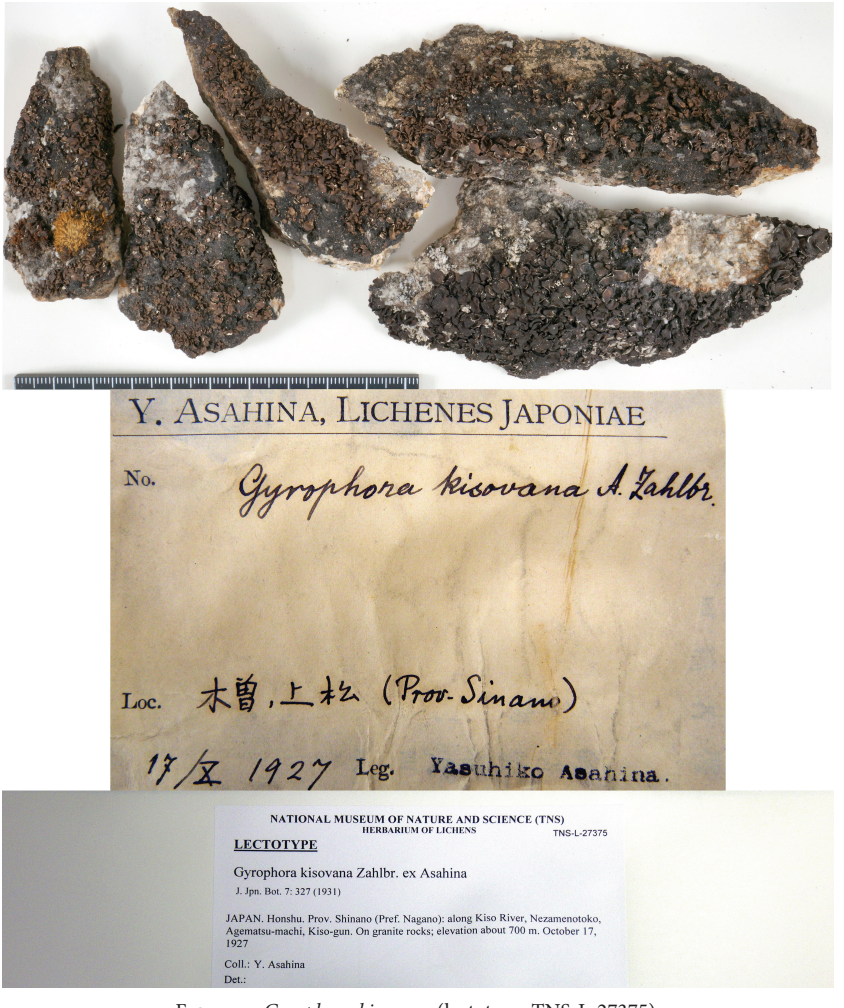
Y. ASAHINA, LICHENES JAPONIAE
No.
Gyrophora kisovana A. Zahlbr.
Loc.
木曽，上松 (Prov. Sinano)
17/X 1927 Leg. Yasuhiko Asahina.
NATIONAL MUSEUM OF NATURE AND SCIENCE (TNS)
HERBARIUM OF LICHENS
TNS-L-27375
LECTOTYPE
Gyrophora kisovana Zahlbr. ex Asahina
J. Jpn. Bot. 7: 327 (1931)
JAPAN. Honshu. Prov. Shinano (Pref. Nagano): along Kiso River, Nezamenotoko, Agematsu-machi, Kiso-gun. On granite rocks; elevation about 700 m. October 17, 1927
Coll.: Y. Asahina
Det.:

Figure 1. *Gyrophora kisovana* (lectotype, TNS-L-27375).

kisoana" (TNS-L-27390) or "*Gyrophora kisogawana*" (TNS-L-27393). These provisional names have never appeared in the protologue or any other publication, however, and the validly published original orthography "*kisovana*" must be accepted (ICN 2012: Art. 60.1).

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